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10/645,189

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Jong-Kwon Kim

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EXAMINER

TARANINA, MARINA Y

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,189

Applicant(s)

KIM ET AL.

Examiner

Marina Taranina

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 13 Mar 2006 and 19 Jun 2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawing (fig. 4) is objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "1" has been used to designate both "copper wire" and "conductor" of block 50. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. (see "*disclosed is a system*" in line 1).

Claim Objections

3. Claim 7 is objected to because of the following informalities: line 1 recites "the power-supply socket devices". It should be replaced with "the at least one power-supply socket device" in order to make a proper antecedent basis for the limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) Claim 1 recites the limitation "the electrical communication device" in line 4.

There is insufficient antecedent basis for this limitation in the claim.

(2) Claim 4 recites the limitation "the conductor interfaces" in line 2. There is insufficient antecedent basis for this limitation in the claim.

(3) Claim 10 recites the limitation "the electrical communication device" in line 4.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2613

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 6, 7, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Furlong (US 6,154,774).

(1) With respect to Claim 1, Furlong discloses a system for supplying power to media converters for optical communication (fig. 2 and 3, col. 2 lines 45-53), wherein each media converter (105, 106, 132, 134, 136, 138 in fig. 4 being a part of each of devices 100 in fig. 3) converts an interface of electrical-communication equipment to an interface of an optical-communication device and converts the interface of the optical-communication device to the interface of the electrical-communication device, the system comprising:

a power-supply device (110 in fig. 4) constructed independently from the media converters (105, 106, 132, 134, 136, 138 in fig. 4) (col. 3 lines 15-18);

at least one power-supply socket device (100 in fig. 2, 3, 4) to supply power (by connections between 110, 114, 102, 116, 201 (or 200) in fig. 4, col. 3 lines 15-18) from the power-supply device (110 in fig. 4) to the media converters (105, 106, 132, 134, 136, 138 in fig. 4) ,

Art Unit: 2613

wherein the power-supply socket device (100 in fig. 2, 3, 4) includes input/output data interfaces (106, 136 in fig. 4) for connection with the electrical-communication equipment (col. 3 lines 32-36, 38-39) and further includes input/output data interfaces (105, 132 in fig. 4, col. 3 lines 29-34) and power-supply interfaces (102, 120, 201 in fig. 4) for connection with the media converters (105, 106, 132, 134, 136, 138 in fig. 4).

(2) With respect to Claim 6, Furlong discloses the system as claimed in claim 1, wherein the electrical-communication equipment (36 in fig. 2, 4) transmits electrical signals to and from media converters (106, 136, 132, 105 in fig. 4) through copper wire (38 in fig. 2) (col. 2 lines 1-3, also col. 4 lines 26-28, CDDI is read as copper wire).

(3) With respect to Claim 7, Furlong discloses the system as claimed in claim 1, wherein the power-supply socket devices (100 in fig. 2, 3, 4) transmit power to the media converters (105, 106, 132, 134, 136, 138 in fig. 4) through copper wire (33, col. 19-20. Although "copper wire" is not explicitly stated in the reference, it is inherent feature, as power wires are conventionally made from copper.)

(4) With respect to Claim 10, Furlong discloses a method for supplying power to media converters for optical communication (fig. 2 and 3, col. 2 lines 45-53), wherein each media converter (105, 106, 132, 134, 136, 138 in fig. 4 being a part of each of devices 100 in fig. 3) converts an interface of electrical-communication equipment to an interface of an optical-communication device and converts the interface of the optical-communication device to the interface of the electrical-communication device, the method comprising the steps of:

Art Unit: 2613

providing a power-supply device (110 in fig. 4) constructed independently from the media converters (105, 106, 132, 134, 136, 138 in fig. 4) (col. 3 lines 15-18); and, providing at least one power-supply socket device (100 in fig. 2, 3, 4) to supply power (by connections between 110, 114, 102, 116, 201 (or 200) in fig. 4, col. 3 lines 15-18) from the power-supply device (110 in fig. 4) to the media converters (105, 106, 132, 134, 136, 138 in fig. 4).

(5) With respect to Claim 11, Furlong discloses the method as claimed in claim 10, wherein the step of providing a power-supply socket device (110 in fig. 4) further includes the step of providing a power-supply socket device including input/output data interfaces (106, 136 in fig. 4) for connection with the electrical-communication equipment (col. 3 lines 32-36, 38-39) and input/output data interfaces (105, 132 in fig. 4, col. 3 lines 29-34) and power-supply interfaces (102, 120, 201 in fig. 4) for connection with the media converters (105, 106, 132, 134, 136, 138 in fig. 4).

8. Claims 1, 2 and 4-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Inagaki (US 6,758,693).

(1) With respect to Claim 1, Inagaki discloses a system for supplying power to media converters (2211 or 2210 in fig. 22) for optical communication, wherein each media converter (2211 or 2210 in fig. 22) converts an interface of electrical-communication equipment to an interface of an optical-communication device (2351 in fig. 23) (col. 15 lines 36-38, 53-54) and converts the interface of the optical-

Art Unit: 2613

communication device (2351 in fig. 23) to the interface of the electrical-communication device (2352 in fig. 23, col. 15 lines 55-57), the system comprising:

a power-supply device (battery source, represented by cord 2235 in fig. 22, col. 15 lines 66-67) constructed independently from the media converters (2211 and 2210 in fig. 22);

at least one power-supply socket device (2202 in fig. 22) to supply power from the power-supply device (battery source, represented by cord 2235 in fig. 22) to the media converters (by using battery supply path,

wherein the power-supply socket device (2202 in fig. 22) includes input/output data interfaces (2272 in fig. 22) for connection with the electrical-communication equipment (via cable 2212 in fig. 22) and further includes input/output data interfaces and power-supply interfaces (2272 in fig. 22) for connection with the media converters (read as when media converter 2511 is connected to one of the ports 2272 in fig. 25, col. 16 lines 47-54, and 58-67).

(2) With respect to Claim 2, Inagaki discloses the system as claimed in claim 1, wherein the power-supply socket device (2202 in fig. 22) further comprises:

a main power-supply socket device for directly receiving power from the power supply device (connection between 2235 and 2232 in fig. 22) (col. 15 lines 66-67);

at least one dependent power-supply socket device (2272 in fig. 22) for receiving the power from the main power-supply socket device (connection between 2235 and 2232 in fig. 22) (col. 15 line 66 – col. 16 line 2);

Art Unit: 2613

at least one conductor interface (2232 in fig. 22) for connecting a dependent power-supply socket device to the main power-supply socket device (col. 15 line 66 – col. 16 line 2).

(3) With respect to Claim 6, Inagaki discloses the system as claimed in claim 1, wherein the electrical-communication equipment (2201 in fig. 22) transmits electrical signals to and from media converters through copper wire (2350 in fig. 23, col. 15 lines 59-60, 2511 in fig. 25 a-b, col. 16 lines 47-52. Although “copper wire” is not explicitly stated in the reference, it is inherent feature as power wires are conventionally made from copper.)

(4) With respect to Claim 7, Inagaki discloses the system as claimed in claim 1, wherein the power-supply socket devices transmit power to the media converters through copper wire (2532 and 2580 in fig. 25 col. 16 lines 58-67. Although “copper wire” is not explicitly stated in the reference, it is inherent feature as power wires and electrodes are conventionally made from copper.)

(5) With respect to Claim 8, Inagaki discloses the system as claimed in claim 1, wherein the media converters (2211 and 2210 in fig. 22) transmit optical data between one another through optical fiber (2212 in fig. 22, col. 15 lines 25-26).

(6) With respect to Claim 9, Inagaki discloses the system as claimed in claim 1, wherein the media converters (2211 or 2210 in fig. 2) comprise an amplifier, a laser diode, and a photodiode (col. 15 lines 53-58, optical sub-module 2351 is read as “a laser diode and a photodiode” because of its function of converting both electrical and optical signals).

Art Unit: 2613

(7) With respect to Claim 10, Inagaki discloses a method for supplying power to media converters for optical communication, wherein each media converter (2210 and 2211 in fig. 22) converts an interface of electrical-communication equipment (2201 or 2202 in fig. 22) to an interface of an optical-communication device (2351 in fig. 23) (col. 15 lines 36-38, lines 53-55) and converts the interface of the optical-communication device (2351 in fig. 23) to the interface of the electrical-communication device (2352 in fig. 23, col. 15 lines 55-57), the method comprising the steps of:

providing a power-supply device (battery source, represented by cord 2235 in fig. 22, col. 15 lines 66-67) constructed independently from the media converters (2211 and 2210 in fig. 22);

and, providing at least one power-supply socket device (2202 in fig. 22) to supply power from the power-supply device to the media converters (col. 15 line 66 – col. 16 line 2, col. 16 lines 7-9, 2352 and 2353 being a part of a media converter 2211 in fig. 23).

(8) With respect to Claim 11, Inagaki discloses the method as claimed in claim 10, wherein the step of providing a power-supply socket device (2202 in fig. 22) further includes the step of providing a power-supply socket device including input/output data interfaces (2272 in fig. 22) for connection with the electrical-communication equipment (via cable 2212 in fig. 22) and input/output data interfaces and power-supply interfaces (2272 in fig. 22) for connection with the media converters (read as when media converter 2511 is connected to one of the ports 2272 in fig. 25, col. 16 lines 47-54, and 58-67).

(9) With respect to Claim 10, Inagaki discloses the method as claimed in claim 11, wherein the step of providing a power-supply socket device (2202 in fig. 2) further comprises the steps of:

providing a main power-supply socket device (connection between 2235 and 2232 in fig. 22) for directly receiving power from the power-supply device (battery source, represented by cord 2235 in fig. 22, col. 15 lines 66-67) (col. 15 lines 66-67);

providing at least one dependent power-supply socket device (2272 in fig. 22) for receiving the power from the main power-supply socket device (connection between 2235 and 2232 in fig. 22) (col. 15 line 66 – col. 16 line 2);

and, providing at least one conductor interface (2232 in fig. 2) for connecting a dependent power-supply socket device to the main power-supply socket device or for connecting one dependent power-supply socket device to another dependent power-supply socket device (col. 15 line 66 – col. 16 line 2).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki (US 6,758,693) in view of Wang (US 6, 611, 069).

(1) With respect to Claim 2, Inagaki discloses all the subject matter as recited in claim 1, but fails to teach the system comprising main and dependent power-supply socket devices.

However, Wang teaches the power-supply socket device (10 in fig. 2-3) comprising:

a main power-supply socket device (11 in fig. 3) for directly receiving power from the power supply device (shown as terminals 71 and 72 of city power supply in fig. 3) (col. 2 lines 39-40);

at least one dependent power-supply socket device (12 in fig. 3) for receiving the power from the main power-supply socket device (11 in fig. 3) (col. 3 lines 35-43);

at least one conductor interface (65 in fig. 3) for connecting a dependent power-supply socket device (12 in fig. 3) to the main power-supply socket device (11 in fig. 3) (col. 3 lines 35-45).

It is desirable to use main and dependent power-supply socket devices. The reason for that is that it saves energy and is more convenient for the user because when the main power-supply socket device is turned off/on, all the dependent power-supply socket devices are turned off/on as well.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use main and dependent power-supply socket devices as taught by Wang into the system of Inagaki in order to save energy and to provide more convenience for the user.

(2) With respect to Claim 5, Inagaki discloses all the subject matter as recited in claim 1, but fails to teach the system wherein the electrical-communication equipment further includes additional interfaces that accommodate additional interface devices.

However, Wang teaches system wherein the electrical-communication equipment (1 in fig. 1) further includes additional interfaces (2 in fig. 1) that accommodate additional interface devices (peripheral apparatuses) (col. 1 lines 31-35).

It is beneficial for electrical-communication equipment to be able to accommodate more than one interface to additional devices in order to simplify the arrangement and reduce the amount of electrical wiring used.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include system wherein the electrical-communication equipment further includes additional interfaces that accommodate additional devices as taught by Wang into the system of Inagaki in order to simplify the arrangement and reduce the amount of electrical wiring used.

11. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki (US 6,758,693) in view of Coffey (US 6, 317, 012).

(1) With respect to Claim 2, Inagaki discloses all the subject matter as recited in claim 1, but fails to teach the system comprising main and dependent power-supply socket devices.

However, Coffey teaches a power-supply socket device comprising:

Art Unit: 2613

a main power-supply socket device (310 in fig. 3) for directly receiving power from the power supply device (represented by input V_{in} in fig. 3) (col. 4 lines 7-10);

at least one dependent power-supply socket device (338-344 in fig. 3) for receiving the power from the main power-supply socket device (310 in fig. 3) (col. 4 lines 22-29, 30-40);

at least one conductor interface (402, 406, 410, 414 in fig. 4) for connecting a dependent power-supply socket device (338-344 in fig. 3) to the main power-supply socket device (310 in fig. 3) (col. 5 lines 2-11).

It is desirable to use main and dependent power-supply socket devices because it allows, first, to realize a power distribution system with different output voltages which provides more flexibility to the system, and second, to make the system more reliable by using back-up power scheme which is possible to realize due to power converters redundancy.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use main and dependent power-supply socket devices as taught by Coffey into the system of Inagaki in order to realize a power distribution system with different output voltages which provides more flexibility to the system, and to make the system more reliable by using back-up power scheme which is possible to realize due to power converters redundancy.

(2) With respect to Claim 4, Inagaki discloses all the subject matter as recited in claim 1, but fails to teach a fuse interposed between the conductor interfaces to prevent the conductor interfaces from a short circuit.

However, Coffey teaches a fuse (502 in fig. 5) interposed between the conductor interfaces (pins) to prevent the conductor interfaces from a short circuit (col. 5 lines 20-25).

It is well known in the art to employ a fuse in an electrical power supply circuit as to protect the component parts of the circuit and to provide user safety. It is also desirable to use resettable fuses that automatically reset once the fault is cleared as this feature simplifies the system operation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a fuse as a part of an electrical power supply circuit as taught by Coffey into the system of Inagaki in order to protect the component parts of the circuit, to provide user safety and, additionally, to simplify the system operation.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki (US 6,758,693) in view of Coffey (US 6,317,012) in further view of Kahle (US 5,270,576).

With respect to Claim 3, Inagaki and Coffey disclose all the subject matter as recited in claims 1 and 2, but fail to teach the system wherein the at least one conductor interface alternatively connects a dependent power-supply socket device to another dependent power-supply socket device.

However, Kahle teaches the system wherein the at least one conductor interface (connection between devices 14 in fig. 1) alternatively connects (by using a switch 22,

Art Unit: 2613

col. 3 lines 58-63, "alternatively" is read as switched ON/OFF) a dependent power-supply socket device ("slave outlet" 14 in fig. 1) to another dependent power-supply socket device ("slave outlet" 14 in fig. 1) (col. 3 lines 64-68).

It is desirable to be able to interconnect dependent power supply socket devices in order to be able to connect a plurality of appliances to a single power source and, therefore, to simplify the arrangement and reduce the amount of electrical wiring used.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include system wherein the at least one conductor interface connects a dependent power-supply socket device to another dependent power-supply socket device as taught by Kahle in order to simplify the arrangement and reduce the amount of electrical wiring used.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6457874 discloses wall mountable mixed media outlet

US 5479288 discloses light transmission module

US 6719149 discloses accommodation apparatus for communication devices

US 6543940 discloses fiber converter faceplate outlet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Taranina whose telephone number is (571) 270-1085. The examiner can normally be reached on Mon-Fri (alternative Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MT
10 Oct 2005


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER